

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/ 563,656  
Source: IFWP  
Date Processed by STIC: 1/8-06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 01/18/2006

PATENT APPLICATION: US/10/563,656

TIME: 15:22:12

Input Set : A:\54-000510US.ST25.txt

Output Set: N:\CRF4\01182006\J563656.raw

```

3 <110> APPLICANT: The Scripps Research Institute
4     Anderson, J C
5     Schultz, Peter G
6     Santoro, Stephen
8 <120> TITLE OF INVENTION: COMPOSITIONS OF ORTHOGONAL GLUTAMYL-tRNA AND AMINOACYL-tRNA
9     SYNTHETASE PAIRS AND USES THEREOF
11 <130> FILE REFERENCE: 54-000510PC
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/563,656
C--> 14 <141> CURRENT FILING DATE: 2006-01-05
16 <160> NUMBER OF SEQ ID NOS: 111
18 <170> SOFTWARE: PatentIn version 3.2
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 78
22 <212> TYPE: RNA
23 <213> ORGANISM: Aeropyrum pernix
25 <400> SEQUENCE: 1
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28 aucccggccg cggcacca                                     78
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33 <212> TYPE: RNA
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36 <400> SEQUENCE: 2
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39 aucccggccg cggcacca                                     78
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43 <211> LENGTH: 78
44 <212> TYPE: RNA
45 <213> ORGANISM: Archaeoglobus fulgidus
47 <400> SEQUENCE: 3
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50 aucccggccg gagcacca                                     78
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54 <211> LENGTH: 78
55 <212> TYPE: RNA
56 <213> ORGANISM: Archaeoglobus fulgidus
58 <400> SEQUENCE: 4
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61 aucccggccg gagcacca                                     78
64 <210> SEQ ID NO: 5
65 <211> LENGTH: 78
66 <212> TYPE: RNA
67 <213> ORGANISM: Halobacterium sp.

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69 <400> SEQUENCE: 5
70 gcuccguugg uguaguccgg ccaaucaucu ugcccucuca cggcaaggac uaggguucaa      60
72 aucccugacg gagcacca                                                    78
75 <210> SEQ ID NO: 6
76 <211> LENGTH: 78
77 <212> TYPE: RNA
78 <213> ORGANISM: Halobacterium sp.
80 <400> SEQUENCE: 6
81 gcucgguugg uguaguccgg ccaaucaugu uggccuuucg agccgacgac caggguucaa      60
83 aucccugacc gagcacca                                                    78
86 <210> SEQ ID NO: 7
87 <211> LENGTH: 78
88 <212> TYPE: RNA
89 <213> ORGANISM: Methanobacterium thermautotrophicus
91 <400> SEQUENCE: 7
92 gcuccgguag uguaguccgg ccaaucauuu cggccuuucg agccgaagac ucggguucaa      60
94 aucccggccg gagcacca                                                    78
97 <210> SEQ ID NO: 8
98 <211> LENGTH: 78
99 <212> TYPE: RNA
100 <213> ORGANISM: Methanococcus jannaschii
102 <400> SEQUENCE: 8
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105 aucccggccg gagcacca                                                    78
108 <210> SEQ ID NO: 9
109 <211> LENGTH: 78
110 <212> TYPE: RNA
111 <213> ORGANISM: Methanococcus maripaludis
113 <400> SEQUENCE: 9
114 gcuccagugg uguaguccgg ccaaucaucc ggcccuuucg aggccgggac ucggguucaa      60
116 aucccggcug gagcacca                                                    78
119 <210> SEQ ID NO: 10
120 <211> LENGTH: 78
121 <212> TYPE: RNA
122 <213> ORGANISM: Methanosarcina mazei
124 <400> SEQUENCE: 10
125 gcuccgauag uguagucucg ccaaucauuc aggacucuca cuccugcgac ugggguucaa      60
127 aucccacucg gagcacca                                                    78
130 <210> SEQ ID NO: 11
131 <211> LENGTH: 78
132 <212> TYPE: RNA
133 <213> ORGANISM: Methanosarcina mazei
135 <400> SEQUENCE: 11
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138 aucccggccg gagcacca                                                    78
141 <210> SEQ ID NO: 12
142 <211> LENGTH: 78
143 <212> TYPE: RNA
144 <213> ORGANISM: Pyrobaculum aerophilum

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146 <400> SEQUENCE: 12
147 cagccggguag ucuagcccgg acaagggaugc gggccucucg agcccgugac ccggguucaa      60
149 aucccggccg gggcacca                                     78
152 <210> SEQ ID NO: 13
153 <211> LENGTH: 78
154 <212> TYPE: RNA
155 <213> ORGANISM: Pyrococcus abyssi
157 <400> SEQUENCE: 13
158 gccccggugg uguagcccgg ucaaaucaugc gggacucucg aucccgcgac ccggguucaa      60
160 aucccggccg gggcacca                                     78
163 <210> SEQ ID NO: 14
164 <211> LENGTH: 78
165 <212> TYPE: RNA
166 <213> ORGANISM: Pyrococcus abyssi
168 <400> SEQUENCE: 14
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171 aucccggccg gggcacca                                     78
174 <210> SEQ ID NO: 15
175 <211> LENGTH: 78
176 <212> TYPE: RNA
177 <213> ORGANISM: Pyrococcus furiosus
179 <400> SEQUENCE: 15
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182 aucccggccg gggcacca                                     78
185 <210> SEQ ID NO: 16
186 <211> LENGTH: 78
187 <212> TYPE: RNA
188 <213> ORGANISM: Pyrococcus furiosus
190 <400> SEQUENCE: 16
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193 aucccggccg gggcacca                                     78
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197 <211> LENGTH: 78
198 <212> TYPE: RNA
199 <213> ORGANISM: Pyrococcus horikoshii
201 <400> SEQUENCE: 17
202 gccccggugg uguagcccgg ucaaaucaugc gggacucucg aucccgcgac ccggguucaa      60
204 aucccggccg gggcacca                                     78
207 <210> SEQ ID NO: 18
208 <211> LENGTH: 78
209 <212> TYPE: RNA
210 <213> ORGANISM: Pyrococcus horikoshii
212 <400> SEQUENCE: 18
213 gccccggugg uguagcccgg ccaaacaugc gggccuuucg agcccgcgcc ccggguucaa      60
215 aucccggccg gggcacca                                     78
218 <210> SEQ ID NO: 19
219 <211> LENGTH: 77
220 <212> TYPE: RNA
221 <213> ORGANISM: Sulfolobus solfataricus

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Input Set : A:\54-000510US.ST25.txt

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223 <400> SEQUENCE: 19
224 gccgcggugg uuagcccgg ucagaaugcg ggccucucga gcccugugacc cggguucaaa 60
226 ucccggccgc ggcacca 77
229 <210> SEQ ID NO: 20
230 <211> LENGTH: 77
231 <212> TYPE: RNA
232 <213> ORGANISM: Sulfolobus solfataricus
234 <400> SEQUENCE: 20
235 gccgcggugg uuagcccgg ucagaaugcg ggccuuucga gcccugugacc cggguucaaa 60
237 ucccggccgc ggcacca 77
240 <210> SEQ ID NO: 21
241 <211> LENGTH: 77
242 <212> TYPE: RNA
243 <213> ORGANISM: Sulfolobus tokodaii
245 <400> SEQUENCE: 21
246 gccgcgguag uauagcccgg ucaguaugcg ggccucucua gcccuguggcc cggguucaaa 60
248 ucccggccgc ggcacca 77
251 <210> SEQ ID NO: 22
252 <211> LENGTH: 78
253 <212> TYPE: RNA
254 <213> ORGANISM: Sulfolobus tokodaii
256 <400> SEQUENCE: 22
257 gccgcgguag uauagcccgg ucaagcacgc gggccuuucg agcccugugac ccggguucaa 60
259 aucccggccg ggcacca 78
262 <210> SEQ ID NO: 23
263 <211> LENGTH: 78
264 <212> TYPE: RNA
265 <213> ORGANISM: Thermoplasma acidophilum
267 <400> SEQUENCE: 23
268 gcuccggugg uguaguccgg ccaagcauua gggacucuca aucccccgac ucggguccaa 60
270 aucccgaccg gagcacca 78
273 <210> SEQ ID NO: 24
274 <211> LENGTH: 78
275 <212> TYPE: RNA
276 <213> ORGANISM: Thermoplasma acidophilum
278 <400> SEQUENCE: 24
279 gcuccggugg uguaguccgg acaagcauau cggccuuucg agccgacgac cuggguccaa 60
281 aucccggccg gagcacca 78
284 <210> SEQ ID NO: 25
285 <211> LENGTH: 78
286 <212> TYPE: RNA
287 <213> ORGANISM: Thermoplasma volcanium
289 <400> SEQUENCE: 25
290 gcuccggugg uguaguccgg ccaagcauua gggacucuca aucccccgac ucggguccaa 60
292 aucccgaccg gagcacca 78
295 <210> SEQ ID NO: 26
296 <211> LENGTH: 78
297 <212> TYPE: RNA
298 <213> ORGANISM: Thermoplasma volcanium

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Input Set : A:\54-000510US.ST25.txt

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300 <400> SEQUENCE: 26
301 gcuccggugg uguaguccgg acaagcauau cggccuuucg agccgacgac cuggguccaa      60
303 aucccggccg gagcacca                                          78
306 <210> SEQ ID NO: 27
307 <211> LENGTH: 78
308 <212> TYPE: RNA
309 <213> ORGANISM: artificial
311 <220> FEATURE:
312 <223> OTHER INFORMATION: consensus tRNA
314 <400> SEQUENCE: 27
315 gcyccggugg uguagcccg ccaakcaugc gggccuyucg agcccgcgac ccggguucaa      60
317 aucccggccg grgcacca                                          78
320 <210> SEQ ID NO: 28
321 <211> LENGTH: 78
322 <212> TYPE: RNA
323 <213> ORGANISM: artificial
325 <220> FEATURE:
326 <223> OTHER INFORMATION: mutant tRNA
328 <400> SEQUENCE: 28
329 gccccggugg uguagcccg ccaagcaugc gggccucuaa agcccgcgac ccggguucaa      60
331 aucccggccg gggcacca                                          78
334 <210> SEQ ID NO: 29
335 <211> LENGTH: 76
336 <212> TYPE: RNA
337 <213> ORGANISM: Aeropyrum pernix
339 <400> SEQUENCE: 29
340 agccgggucg ucuagcggcc caggaugcgg ggcucuggcc cccgugaccg ggguucgaau      60
342 ccccgcccgg cuacca                                          76
345 <210> SEQ ID NO: 30
346 <211> LENGTH: 76
347 <212> TYPE: RNA
348 <213> ORGANISM: Aeropyrum pernix
350 <400> SEQUENCE: 30
351 agccgggucg ucuagcggcc caggaugcgg gguuuuggcc cccgugaccc ggguucgaau      60
353 cccggcccgg cuacca                                          76
356 <210> SEQ ID NO: 31
357 <211> LENGTH: 76
358 <212> TYPE: RNA
359 <213> ORGANISM: Archaeoglobus fulgidus
361 <400> SEQUENCE: 31
362 agccccgugg gguagcgguc aaucugccg gacucuggau ccggcgacgc cgguucgaau      60
364 ccggccgggg cuacca                                          76
367 <210> SEQ ID NO: 32
368 <211> LENGTH: 76
369 <212> TYPE: RNA
370 <213> ORGANISM: Archaeoglobus fulgidus
372 <400> SEQUENCE: 32
373 agccccgugg uguagcgguc aaucaugcgg gccuuuggag cccgcgaccg ggguucgaau      60
375 ccccgccggg cuacca                                          76

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/563,656

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Input Set : A:\54-000510US.ST25.txt  
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**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:66; N Pos. 10,28  
Seq#:80; N Pos. 3749,3769  
Seq#:81; N Pos. 3274,3294  
Seq#:103; N Pos. 18,36

**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:27,28,58,59,60,61,62,63,64,65,66,67,80,81,82,83,84,85,86,87,88,89,90,91  
Seq#:92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111

**VERIFICATION SUMMARY**

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Input Set : A:\54-000510US.ST25.txt

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L:13 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:0  
L:2222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80 after pos.:3720  
L:2389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:3240  
L:2776 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:0